DOCUMENT RESUME

ED 222 644 CE 033 626

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TITLE	Competencies for Adult Basic Education and Diploma Programs: A Summary of Studies and Cross-Reference of Results.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
PUB DATE	[80]
NOTE	51p.
PUB TYPE	Information Analyses (070) -- Statistical Data (110)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	*Adult Basic Education; *Competence; *Educational Research; *High School Equivalency Programs; Program Descriptions; *Research Projects; State Surveys

ABSTRACT

This report summarizes and cross-references the results of 12 studies dealing with competencies for Adult Basic Education (ABE) and diploma programs. Described in the report are the following studies/projects: (1) the Adult Performance Level (APL) Study; (2) five APL-based validation studies (the New Jersey ABE Study, the New Jersey English as a Second Language Study, the User Needs Assessment (USOE) Region X Study, the Pennsylvania Assessment Project, and the Alaska Validation Survey); and (3) six competency identification studies not limited to APL (the Utah Consumer Competencies Study, the Adkins-Connecticut Reconnaissance Survey Method, the California ABE Needs Analysis, the New York External High School Diploma Program Competencies, the National Center for Research in Vocational Education Project, and the Northwest Regional Educational Laboratory Functional Literacy Project). Following an outline of the purposes and procedures of the individual studies, the competencies identified in the studies are compiled and cross-referenced. The compilation includes major objectives in the following 12 knowledge/information categories: consumer economics, community resources, government and law, health and safety, occupational knowledge, cultural knowledge, communication skills, language, computation skills, interpersonal relations, problem solving, and specific job skills. (MN)

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COMPETENCIES FOR ADULT BASIC EDUCATION AND DIPLOMA PROGRAMS: A SUMMARY OF STUDIES AND CROSS-REFERENCE OF RESULTS

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COMPETENCIES FOR ADULT BASIC EDUCATION AND DIPLOMA PROGRAMS: A SUMMARY OF STUDIES AND CROSS-REFERENCE OF RESULTS

In February 1978, the U.S. Office of Education sponsored an invitational workshop on adult competency education. A summary of the research and activities relevant to competency-based adult education was presented and later published (Fischer, 1978). A second paper briefly reviewed additional efforts for a National Invitational Workshop on Competency-Based Adult Education (Fischer, 1979). In both cases, a number of the surveys and studies were still in progress, and final results not yet available. This current paper is based on the completed projects. Its purpose is to update and analyze in greater detail these efforts to identify competencies necessary for adult functioning and to summarize competencies from the various studies.

1. Identification of Competencies

In the last few years, studies of the necessary competencies for adults have concentrated on those related to functioning successfully outside of school—a reaction to the emphasis on basic reading, math, and grammar skills within our Adult Basic Education and high school equivalency programs and an attempt to alter at least the context of that instruction, if not the entire curriculum.

Identifying competencies necessary for successfully carrying out adult responsibilities is a complex process involving a series of decisions. Either directly or indirectly, the program developers make decisions regarding:

- What are the competencies?
- What level or standard of performance indicates competence?
- Which competencies are truly necessary?
- On what criteria should decisions of necessity be based?
- How should competencies be stated?

If the procedure selected involves surveying people, additional decisions include:

- Who should be surveyed?
- Should the survey be of a questionnaire type or an assessment instrument?
- How are the competencies transposed into questionnaire or assessment items?
- If a questionnaire is used, what is the best way of phrasing the question to the respondents so that the response is valid?

Throughout the process of competency identification, judgments are made that reflect the influence of such factors as the individual or organization that is conducting the study, the funding agency, the amount of money available, and the availability of desired information. Invariably, subjective judgments enter into and affect the final results. These are most obvious in a comparison of the competency domains and the items of the questionnaire or assessment instrument. These decisions are open to criticism by those who disagree with them or see weaknesses in their implementation. In reviewing these studies or any others, the reader should keep in mind the purposes, perspectives, and procedures used in order to understand accurately the results and the comparison of the various efforts.

One of the earliest, and probably the most visible, effort to identify adult functional competencies was the Adult Performance Level (APL) project funded by USOE and conducted by the Texas Education Agency and the University of Texas. This project became a point of departure for many others who have sought to replicate or expand on the APL lists.

Reactions to the APL listing varied. While some adult educators readily accepted the listing, others questioned the procedures (Griffith and Cervero, 1976) and asserted that the statements and items were value laden and/or limited. These reactions are reflected in the approaches taken in later studies. In some cases, other researchers sought to determine which of the APL objectives ABE students most needed. Other studies sought to go beyond or expand the APL listing. The APL work, however, is still a primary influence on other research, whether or not the premise and results are accepted.

This review of competency identification studies focuses on: (1) studies that were limited to reactions to the APL listing; and (2) studies that were not limited to APL. The reviews of both types of studies emphasize the procedures used to identify competencies. In both cases, only studies that produced listings of competencies based on substantial representations of subjects have been included; studies that are limited to one program or community have not been included.

2. The APL Study

Although the APL work has been reviewed extensively in other articles, its importance as a major effort in studies to determine competencies merits its inclusion in this review. The APL research was initiated by USOE to stimulate development of curriculum specifically designed for adults. The project had three objectives:

- To determine the basic requirements of adult living.
- To determine the basic performance criteria associated with these requirements.

- To develop, field test, and administer an instrument that would identify levels of competency.

The first objective was accomplished by: (1) reviewing behavioral and social research to categorize the needs of undereducated and underemployed adults; (2) surveying state and Federal agencies and foundations to identify characteristics that distinguished successful from unsuccessful adults; (3) conducting a series of regional conferences on adult needs to which adult educators, representatives from the private sector, and persons from state and Federal agencies were invited; and (4) interviewing undereducated and underemployed adults. The project staff arrived at the concept of functional literacy that included the five knowledge and four basic skills areas identified on figure 1. The range of skills included led the researchers to drop the term "functional literacy" in favor of "functional competency" (Adult Performance Level Project Staff, August 1977).

FIGURE 1

THE APL MATRIX

KNOWLEDGE AREAS / SKILLS	CONSUMER ECONOMICS	COMMUNITY RESOURCES	GOVERNMENT AND LAW	HEALTH	OCCUPATIONAL KNOWLEDGE
COMMUNICATION SKILLS					
COMPUTATION					
PROBLEM SOLVING					
INTERPERSONAL RELATIONS					

Several concepts are integral to the APL definition of functional competency:

- Functional competency is meaningful only in a specific context. Recognizing the differences among various subpopulations, the researchers chose to "create a single indicator" that was common to most people in the United States.
- Functional competency entails the application of skills to the five general knowledge areas and is a function of individual skills and social requirements.
- Functional competency is directly related quantitatively to success in adult life. This assumption led the researchers to adopt an index of success that was a composite of income, level of education, and occupational status.

Though the lack of full documentation of the background research leading to the lists of competencies and the use of the selected success indicators have been criticized, the APL list of competencies and the survey have provided a basis for modifying ABE curriculum and procedures. Several lists of competencies have been issued by the project. The most widely distributed and quoted are the 65 general APL objectives. The more recent listing of 41, which is the basis for the teaching modules developed by the APL staff, grew from curriculum writing efforts rather than from additional research. In compiling the latter, the staff tried to eliminate some of the duplication across objectives (APL Project Staff, 1976; November 1977).

The format for stating the APL competencies consists of a general goal statement, intermediate objectives, and enabling or task objectives. These levels of objectives have been designated unit objective, end behaviors, and learning steps. Theoretically, if an individual can perform each of the learning steps, that person has mastered the unit objective and is competent in that area. Each objective involves tasks for using reading and other communication skills, computation, interpersonal relations, and problem-solving skills.

Some APL competency statements are more specific than others: for example, "to be aware of advertising techniques" *vs.* "to be able to count and convert coins and currency"; "to be aware of various aspects of self and to use this to promote personal growth and effective interpersonal coping" *vs.* "to prepare for job applications and interviews." This variation in the phrasing of competencies is not unique to APL. It reflects the difficulty of stating various competencies, some of which may be relatively straightforward while others are more abstract. The degree of specificity of competency statements affects the determination of standards for demonstrating possession of those competencies. Standards and component behaviors for less concrete competencies are subject to greater variation and value interpretations.

3. APL-Based Validation Studies

Studies designed primarily to determine the appropriateness of the APL list of competencies to ABE populations were conducted in New Jersey (two efforts), USOE Region X, Pennsylvania, and Alaska. These studies primarily assessed student need or interest in response to statements drawn from the APL list of major or enabling objectives. Frequently, only some of the APL statements were used, and these were paraphrased from the original APL statements.

New Jersey Adult Basic Education Study

To determine the appropriateness of the APL objectives for New Jersey native born and English as a Second Language (ESL) ABE students, two studies were conducted. Flaherty (1977) interviewed English-speaking ABE students to determine their self-perceived needs and interests. Forty-two statements were selected to reflect the five APL knowledge areas. Although the process for selecting the particular statements used was not described, emphasis was placed on statements that would be brief and understandable by ABE students.

Generally, many of the competency statements included in this study could be viewed as subcomponents of the APL unit objectives rather than as a reflection of the total scope of objectives. For example, "Filling Out an Income Tax Form" and "How the Court System Works" (the APL statements) are not synonymous with "To Understand the Concept of

Income Tax" and "To Understand the Court Systems and How to Use the Legal System in Order to Protect Your Rights and Possessions" (the terms used by the survey).

A preliminary interview schedule was field tested and revised to construct the final 27-page questionnaire. For each statement, the respondents were asked: "Do you want to learn this skill in your ABE class this year?" "How much do you already know about that skill?" "Do you think it's necessary, helpful or just interesting for you to learn?" One competency for each of the five knowledge areas was probed in greater depth. The interview also included open-ended questions to ascertain additional skills desired and the priority of these desired skills.

The survey population included only students participating in ABE basic skills instruction. Twenty programs were randomly selected to represent programs of different size. Ten students present at the time of the scheduled site visit were interviewed. The final sample of 204 proved to be generally representative of the total ABE population, particularly of those in the Atlantic shore area. Based on the results of the APL test instrument, these respondents had a below average mean score. The instrument used was the American College Testing Program's revision of the original APL test.

Student responses for interest in learning and necessity of learning a competency were related. However, in all instances, a greater percentage of respondents were *interested* in learning a competency than felt it *necessary* to learn it. Though over 50 percent showed an *interest* in learning skills associated with occupational knowledge, government and law, consumer economics, and health, the percentages who felt it *necessary* to learn those areas were 40 percent, 38 percent, 37 percent, and 28 percent, respectively. Ratings of respondents differed noticeably when race, urbanism, reading ability, age, and chief wage earner's income were considered.

In spite of the positive interest in learning APL areas, when asked why they enrolled in the program only 5.4 percent stated a reason related to life-coping skills. Students expressed greater direct interest in instruction related to the basic skills and specific vocational skills than in general APL topics. Flaherty thus concluded that although New Jersey students were interested in learning competencies, basic skills were a higher priority. The difficulty with this finding, which is not uncommon in competency-based research, is that no one is sure that the respondents distinguish between basic skills (reading, writing, oral communication) and basic competencies (the application of these skills and appropriate knowledge to situations they face in their lives).

New Jersey English As a Second Language Study

A second study was conducted in New Jersey to ascertain APL topics of greatest interest and importance to ESL students in ABE programs in the northern part of the State (Bodman and Lanzano, 1978). The intent of the study was to help teachers select meaningful contexts for ESL instruction. To keep the questionnaire to a reasonable length, only two APL content areas—occupational knowlege and consumer economics—were included. A 66-item ESL questionnaire was translated into 18 different languages to ensure that it would be understood by students of the different language backgrounds in the area.

Students were asked to respond to each of the 66 topics by rating their interest in and the importance of each. For both interest and importance, students had six options that included "no opinion," "don't understand," and "know enough." A "free response" section allowed students to indicate additional topics of interest or importance to them, what they found most difficult to learn when they first arrived in the United States, and what activities were the most different for them in this country.

The majority of the responses (359 out of 453) were from Spanish-speaking students. An additional 57 were Japanese, and 37 were Polish speakers. Although demographic data were collected, there was no indication of how representative the respondents were either of all New Jersey ESL students or of those from the counties surveyed.

Responses were analyzed according to these three language groups. As with other surveys of this type, ratings of interest and importance were highly correlated. In all three groups, ESL students were enthusiastic about learning topics included in the APL study. Spanish-speaking students were most receptive to the APL topics, while Japanese and Polish students were less responsive. Different groups were also interested in learning different topics. Spanish-speakers were most interested in occupational knowledge topics, while Japanese respondents ranked five consumer economics items as of greatest interest to them. There were also many variations for individual items and among Spanish nationality groups.

Since Spanish-speaking students comprised the largest group of respondents, the items of greatest interest/importance to these students were identified. Four indicators were used:

- Fifty percent or more respondents judged the topic very interesting.
- Fifty percent or more judged the topic very important.
- The mean interest rating was 2.5 or higher (scale of 1 to 3).
- The mean importance rating was 2.5 or higher.

The 23 topics listed in table 1 met one or more of the above criteria.

Spanish and Japanese student responses to "free response" items were categorized and are listed in order of frequency for each category in table 2. The most frequently noted free response topics relate to learning the English language and the new culture. Other frequently mentioned items repeated some of the APL topics (e.g., employment, health care, food, and transportation). Some of these, however, were not included on the survey, which dealt only with occupational knowledge and consumer economics. Free response items apparently tended to relate to specific and immediate student concerns (e.g., "talk to mechanic about problems with car").

The frequency of life-coping skills topics, along with the English-language and cultural topics, could realistically be interpreted to support ESL students' interest in learning both life-coping skills and English. Many of the survey items were related to topics (information), while about 15 others involved very specific language behaviors (e.g., "speaking in a job interview"). Life-skills topics can provide ESL teachers a basis for designing instructional content, providing wanted information, and/or teaching English language skills.

TABLE 1

NEW JERSEY ESL TOP TWENTY-THREE TOPICS FOR SPANISH-SPEAKING STUDENTS

- Discuss what kind of job is best for you.
- Learn how to take employment tests.
- Learn how to speak in a job interview.
- Learn about deductions from a job paycheck.
- Discuss job benefits: vacation time.
- Discuss job benefits: sick leave.
- Discuss job benefits: medical insurance.
- Discuss job benefits: social security.
- Discuss job benefits: pensions.
- Discuss job benefits: unemployment insurance.
- Learn about job qualifications.
- Discuss job benefits: labor unions.
- Discuss job problems: lay offs.
- Learn how to read advertisements to tell legitimate offers from suspicious offers.
- Discuss how to look for a job.
- Discuss how to apply for a job.
- Discuss job benefits: life insurance.
- The good and bad of charge accounts.
- Discuss warranties and how to use them.
- Fill out application forms.
- Reading leases.
- Learn how to get a loan for a car.
- Learn how to use a bank.

TABLE 2

NEW JERSEY ESL FREE RESPONSE ITEMS

English
English
conversation
comprehension of T.V., movies
reading and writing
letters
composition
telephone
English for daily use

Culture
customs
way of life
ambiance
everything
many things
people
pace of life
youth
people's character
freedom
behavior
American mentality
social system
human relations
family life
fear
lack of communication among neighbors
holidays
racism
authority
respect for humanity
no servants
social relations of children

Climate
climate

Employment
work
day of work
employment opportunities
start a business
become a secretary
become a commercial artist
become a teller
become a nurse
become a factory worker
join the army

Employment (continued)
learn a trade
looking for work
reading newspaper ads for jobs
job benefits
social security
choosing a career
knowing about employment possibilities
applying for a job
filling out job applications
work hours
labor laws

Transportation
finding my way
getting from place to place
following directions
public transportation
local streets
cars
talk to mechanic about problems with car
driver's license

Food
food
restaurants

Shopping
shopping
English in food and clothing stores
knowing quality of product
shopping for food
exchanging items
knowing correct prices

Finances
money
income tax
banking
economic system
high cost of living
welfare
credit
money order

Academic Subjects
current events
history

Academic Subjects (continued)
politics
art
religion
architecture
international relations
literature
music
problems affecting humanity
science

U.S. Government and Law
U. S. laws
getting a resident visa
citizenship exam

Miscellaneous
emergencies
calling police or firemen
car accidents
the city
big cars
wide streets
pollution
recreation
insurance
utilities
travel agencies

Children
adolescents
psychology of adolescents
how to deal with adolescents
school for children
talking with children's teachers

System of Education
system of education
enrolling in college
financial aid for college

Housing
housing
appearance of housing
decorating an apartment

Clothing
style of clothing

USOE Region X Study

The User Needs Assessment conducted in USOE Region X by the Northwest Regional Educational Laboratory (NWREL) included only statements related to consumer economics and was designed to provide a basis for developing curricular materials (Pickens and Sellers, 1977). ABE students in Idaho, Washington, Oregon, and Alaska were included in the survey. To design an instrument appropriate for ABE students, each APL consumer economics objective was rewritten to a fifth grade or lower reading level. Respondents were asked if they felt it was "not important," "kind of important," or "very important" for materials to be developed in each of the 20 areas.

Survey sites were selected to represent the proportion of ABE students in each state, rural/urban location, ethnic group, income level, age, and sex. Each site received 20 surveys, 19 to be completed by students and 1 by an instructor. Of the 460 surveys distributed, responses were received for 382.

The percentages of students ranking an objective as "very important" varied somewhat from state to state and for those in different sex, ethnic, age, and income groups. The manner of asking students to rank importance may have influenced student responses. Students were asked how important it is to develop *materials* dealing with each area. They may actually have ranked a statement as "not important" if their program already had materials related to that topic.

As with other studies, the survey statements varied somewhat from the original APL statement. This variation in some cases resulted in a narrower presentation of the competency (e.g., "How to Count and Change Money" and "How to Use Math in Handling Money" for "To be Able to Count and Convert Coins and Currency, and to Convert Weights and Measures Using Measurement Tables and Mathematical Operations").

Pennsylvania Assessment Project

A statewide APL validation survey was conducted in Pennsylvania as part of an ABE Assessment Project (Lindsay and Nead, 1977). The primary purpose of the survey was to determine how receptive the participants in ABE programs would be to APL instructional topics. The 1,580 student and 277 staff respondents were associated with 60 programs in the State and represented beginning, intermediate, and advanced levels of ABE instruction.

Four general behavior statements that illustrated the reading, writing, computation, and problem solving tasks represented in each APL knowledge area were developed. Students were asked:

- Could they "do tasks like this now?"
- If an adult education course could teach them "to do this sort of task well," would they take such a course?

Teachers were asked:

- Did they teach this type of competency specifically?
- If they did not teach it specifically, did they provide training in the skill involved?
- How important did they consider this type of competency?

Additional information on the rating of competencies was gathered during a followup workshop.

Since the study was intended to determine receptivity to APL topics, the statements to which respondents reacted were composites of selected tasks. For example, the consumer economics reading item was stated as follows:

> Being able to read catalogs, consumer guides, advertisements, and similar material, in order to select goods and services that you need daily.

The presentation of life-skills topics also emphasized individual basic skills rather than the integration of basic skills to perform an adult life task. Thus, respondents did not react directly to statements correlated to an APL objective or task.

The researchers also collected test data using the original Texas version of the APL survey. Because that version of the survey required more time to administer, four parallel tests of equal difficulty were compiled. Using a simultaneous person-item sampling technique, the tests were administered to students at three instructional levels.

When categorized according to students' instructional levels and teachers' and workshop participants' rankings, the responses to the survey varied. There was, however, general agreement that occupational knowledge was of greatest importance, with consumer economics next.

Scores on the APL survey indicated that over half of the students fell into the lowest APL category (APL 1), and that the APL survey scores were related to instructional placement in program. Moreover, the perceived ability to do the tasks included on the questionnaire and willingness to take part in instruction related to those tasks was a direct reflection of instructional level. That is, more students at the first to fourth grade level fell into the APL 1 range; they felt they could not complete the tasks, and were willing to participate in instruction to learn how. Interestingly though, there appeared to be little relationship between student self-assessment of ability and actual performance on related test items.

In spite of the positive response to desire for instruction for reading, writing, computing, and problem solving using life-related materials, counselors, supervisors, and students all ranked "Preparing for the High School Equivalency Exam" and "Increased Self-Confidence" as higher priorities than coping with life roles and problems.

Alaska Validation Survey

The Alaska APL Validation Survey (Alaska Center for Staff Development, 1978; Alaska Commission on Post Secondary Eduction, 1977) was intended to determine the degree of congruence between areas in which adults were found to be deficient on the national level and the perception among Alaskans in Basic Education Programs as to the relevance of these areas. In addition to ascertaining the perceived needs of students across the State, the instrument was designed to assist local programs in identifying specific needs/interests of students within those programs.

To compile the survey, the list of 65 APL objectives was used as a basis for 81 items across all five APL knowledge areas. Each item began with the words: "I want to learn...." Students checked: "Yes," "I think so," "I don't know," "I don't think so," or "No." A priority rating of 1 to 5 was obtained and mean preference scores were calculated.

The survey was administered to 392 ABE students and nonstudents between January and May 1978. The nonstudents included teachers, administrators, or other professionals employed in ABE programs. Data were analyzed according to the following categories: rural students, urban students, nonstudents, region, employment status, and income. The priority ratings listed in the Summary of Competencies (section 6 of this paper) were those for all students surveyed.

A review of items indicated that several were phrased to be more specific to Alaska (e.g., "How to Store Food, Like Canning or Freezing"). Most, however, were statements that reflected portions of APL objectives. In fact, a few could have related to several objectives (e.g., "I Want to Learn About Buying Food"). The priority rankings of items and APL categories varied noticeably among people included in the categories above. Often, one item would fall among the top 10 for one group, but not be similarly ranked for any other group. Preference for general APL knowledge areas, ranked across all groups, was as follows: (1)consumer economics; (2) health; (3) government and law; (4) community resources; (5) occupational knowledge.

4. Competency Identification Studies Not Limited to APL

Utah Consumer Competencies Study

A somewhat unique approach was used by the Consumer Research Center to identify specific consumer competencies needed by Utahans (Alfaro and Gillpatrick, 1978). Beginning with the proposition that Utah's cultural and economic situations are unique, the researchers also recognized the effect that life-cycle position might have on consumer competency needs.

To prepare a preliminary list of consumer needs, the researchers used information from: (1) a literature review, through which consumer education topics were identified; (2) an expenditure profile, based on Bureau of Labor Statistics data, of adult consumers according to life-style stages; (3) a list of prominent consumer frauds in Utah; and (4) a subjective knowledge of the demographic and cultural make-up of the State.

The list of consumer needs was then ranked according to the following criteria: indicated economic importance to Utahans; incidence of consumer fraud complaints; and judged potential for improving the well-being of Utah consumers through education. The list was also ranked for people in the following circumstances: bachelor state; young married; full nest I; full nest II; full nest III; empty nest I; empty nest II; single parent with children. Competency topic areas included housing, transportation, home management, and finances.

The priority of topics and the specific tasks associated with each varied according to the life stage. For example, the top priority for young marrieds was transportation; for empty nest

II, it was health. Although financial planning was third in priority for both groups, young marrieds emphasized budgeting, credit-banking, and financial records, while Social Security, wills, trusts, and estates were more important for empty nest II adults. The list of consumer needs identified through these rankings provided the basis for developing specific behavioral objectives—i.e., the values, knowledge, and skills deemed necessary to make an economically rational expenditure.

The Utah listing included items from the APL areas of community resources, occupational knowledge, and health. In addition, many of the specific competencies could be considered to be above the level of minimal coping (e.g., wills and estate planning, music lessons/ instruments).

To aid in the development of curriculum, project staff recommended that instruction be modularized. Core topics would provide a common instructional experience. Modules would augment the core instruction and deal with the immediate competencies associated with each core topic for the various life situations. This system was intended to provide flexibility and appropriate instruction for adults.

The use of Bureau of Labor Statistics data to develop spending habit profiles for eight lifestyle stages suggests a relevant consideration for competency identification studies. Although only national statistics were available, the findings were modified to suit Utah's demographic and cultural situation. The lack of available objective data specific to Utah required substantial reliance on subjective judgment for this modification. It should be noted that this research design did not include collecting questionnaire or assessment data from Utahans.

The Utah study represented a different approach to identifying competencies—one that attempts to deal with the reality of adult life and adult learning. Invariably, needs assessments have found that the interest and perceived needs of students vary according to sex, age, ethnic group, income, and other factors. In addition, a prevalent observation among adult educators is that instruction must appear relevant to individual learners. The concept of identifying variations in emphasis of particular competency topics for groups and individuals is important for program developers in that it allows for variation in competencies acquired and tasks undertaken while maintaining some consistency in curriculum competencies.

Adkins-Connecticut Reconnaissance Survey Method

As the first step in designing a Life-Skills Educational Program, Winthrop Adkins proposed an approach for identifying specific social and psychological problems of living (Adkins, 1977). The procedure, called the Reconnaissance Survey Method, stresses the collection of qualitative data through counseling-interview techniques. The information collected is then analyzed to identify clusters of problems and to organize specific problem data within each cluster. Collection and refinement of problem statements are carried out over a series of interviews with several groups. Generally, the approach is similar to grounded theory or qualitative research procedures.

The Reconnaissance Survey procedure was used in the Valley Regional ABE program area of Connecticut. This program served five towns in the State and was considered to be representative of the State's industrial regions. Interviews were conducted with 258 people

from nine groups (e.g., blacks, ex-offenders, welfare mothers) considered to be in greatest need of ABE instruction, as well as with ABE program staff members and personnel from other community programs.

The statements appeared to cluster into seven categories:

- Occupational and Career Problems.
- Problems in Living in Community.
- Problems of Personal Growth and Development.
- Problems in Relating to Others.
- Medical and Health Problems.
- Marriage and Family Problems.
- Problems of Being a Parent.

For each major category there was a list of subcategories, each with supportive problem statements. The population(s) from which the problem statements derived were indicated in the listing. (To compile the Summary of Competencies for this study, only the problem statements pertaining to all nine groups interviewed were considered.)

The findings from the Adkins-Connecticut survey were not presented as competency statements. However, the procedure for problem identification demonstrated an alternative or additional step that researchers could employ in determining necessary competencies. The Summary of Competencies tables examine the extent to which the specific elements of the problem statements relate to competencies included in APL and other lists. Problems that did not relate to specific competency statements could prove useful in refining or expanding such lists.

Adkins' perspective toward life skills must also be noted, as this perspective affected the findings and problem statements. In this life-skills approach, social and psychological problems rather than literacy skills and knowledge are emphasized. Learning activities dealing with the problems are supposed to evolve through a problem-solving process rather than consist of a fixed, predetermined set of tasks.

An examination of the problem statements indicates that—in spite of the difference in procedures for identifying needs, Atkins' perspective on the nature of those needs, and the phrasing of statements—many either directly refer or relate to basic skills and knowledge. Many statements indicate a recognition of lack of basic skills and vocational training, while others, such as "Knowing Your Rights on the Job," indicate an information need. Other problem statements relate to such items as limited perceptions of possible choices (e.g., "Not Seeing Geographic Mobility as an Option"), dealing with people and conflicts (e.g., "Resolving Conflicts with Co-workers"), or emotional/value/attitudinal perspectives. Still others relate to social conditions (e.g., "Problems Which Prevent Certain Groups from Enrolling in Educational or Training Programs") or to a low income (e.g., "No Money to Hire a Baby-sitter").

In comparing the Connecticut problem statements with the APL objectives, it appears that the content of many of the problem statements directly corresponds to APL general and enabling objectives. The problem statements derived from Adkins' research, however, emphasize

the fact that, although individuals can increase their competencies by acquiring information and skills, there is also an external, societal factor involved in success. This factor places an added burden on disadvantaged adults and may, in fact, produce barriers that cannot be overcome through education.

California ABE Needs Analysis

The California Division of Adult and Continuing Education contracted with NOMOS Institute (June 30, 1977; December 1977) to conduct a Statewide analysis of public needs for Adult Basic Education. The intent was to identify all necessary competencies that are functional to economic and educational success in today's demanding, complex society. The proposed procedures for identifying these competencies involved, first, a systematic search of existing information from which a universal list of competencies could be developed. The APL list was one source; the researchers also used such other sources as public agencies, a literature search, statistical data from public records, and interviews with educators, legislators, agency staffs, and others. The final selection of a set of competencies was then determined by an appointed panel of adult educators.

NOMOS was also to determine the standards for the competencies, methods for determining possession of competency, a sampling plan, and the competency levels of California adults. Although the researchers drew on the APL listing, information from interviews with 50 agency representatives indicated that previous work had not accurately identified many of the competencies. The plan was interesting for its proposed use of multiple sources to identify competencies and the variety of "found" data, such as tax returns, that were to be used to determine performance indicators and criteria.

The project report indicates that the list of specific competencies evolved from: a literature review; a listing of generalized competencies; the composition of an organizational framework; specific statements generated by an expert panel; and extensive review, rewriting, and editing (NOMOS, May 1978). The proposed procedures are worth considering because they represent a theoretical perspective regarding procedures that should be followed. That such procedures were not implemented as planned demonstrated the practical realities of doing research to identify competencies, especially when available time is limited.

Five major competency categories were determined:

- *Cultural Competencies*—related to beliefs, attitudes, traditions, and behaviors strongly held by society and including such things as art expression and appreciation; custom, ceremonies, and traditions; communication, recreation, and leisure; religion, morality, and values; and philosophy, science, and history.
- *Economic Competencies*—related to acquiring and managing goods and services and including such activities as banking, budgeting, consumerism, and employment.
- *Health and Safety Competencies*—including such areas as first aid, health hazards, nutrition, and health literacy.
- *Interpersonal Competencies*—including such competencies as verbal communications, self-awareness, and handling stress that enable a person to live with and among others.

- *Socio-political Competencies*—including citizenship, sources of information, legal processes, political processes, public resources, and transportation.

The five categories contained subcategories and specific statements for each subcategory. These specific statements represented the competencies.

The resultant list contained some competencies that many might not consider necessary for successful survival (e.g., "Recognize Major Forms of Dance" and "Engage in Creative Pursuits"). The criterion for necessity is one that must be very clearly stated and that deserves greater attention by those conducting competency identification studies.

In discussing definitions of competency, Heath (1973) addressed these conceptual considerations. He asserts that: "A competency at a particular level of performance is functional when it serves to meet a need of a person with particular characteristics...in a particular set of circumstances." Functional competency is viewed as a means toward individual liberation through enabling a person to meet a self-perceived need. Heath further points out that although a person may not have a particular competency, as indicated by performance on some test, this does not establish that the individual needs to develop that competency. Further, to identify the need for educational treatment, the client must be aware of the competency deficit, must come to perceive the deficit as undesirable, and must think it possible to move toward reducing that deficit.

A Statewide survey of adult competency in California utilizing the 130 performance indicators developed by NOMOS was recently conducted. The respondent sampling was based on selected geographic region, ethnicity, age, and gender stratification variables. In addition, certain census variables were used to describe the sample, including employment status, occupational level, highest grade of school attended, marital status, place of parent's birth, and language spoken at home when the adult was a child. The criteria for analyzing the responses or performance levels for each survey question were thought of as: Level One = a correct response; Level Two = an incorrect response; and Level Three = a nonscorable response.

On the 130 performance indicators used, the total sample achieved a 75 percent overall "competent" (Level One) performance level. Women performed slightly better than men on these indicators, and this difference was consistent in magnitude across all other categories except the economic category, in which men and women performed at nearly identical levels. The age group between 30 and 60 years, on the average, displayed higher competency scores than both the groups between 15 and 30 years and those over 60 years. Ethnic minorities scored consistently lower than the white majority. Comparing performance in 10 of the State statistical areas showed that the urban centers have heavy concentrations of populations with competency performance deficits.

When the sample was categorized by employment status, those not working evidenced a performance level considerably lower than those employed either parttime or fulltime. Similarly, those who had completed more formal education scored better on the survey.

Among the marital status groups, those who were widowed appear to have the largest performance deficits. Adults whose parents were born outside the United States and those

raised in homes where language other than English was spoken also scored poorly on the performance indicators.

In summary, the major demographic groups with the most severe performance deficits were (rank order not implied): young adults and the elderly; minorities; urban residents; those not employed; those with little formal education; the widowed; immigrants and those with immigrant parents; and those with non-English language home backgrounds.

The analysis of survey data also focused on the five categories of competencies:

- *Cultural Competencies.* Performance on these indicators seemed particularly related to minority status and formal education. Linguistic minorities seemed to have particular difficulties in finding adequate recreational resources.
- *Economic Competencies.* Performance levels were lowest among the young (under 20), the elderly, the unemployed, and those with non-English speaking home backgrounds.
- *Health and Safety Competencies.* This category included performance levels that were higher than any of the other categories (nearly 80 percent correct). Adults whose parents were not born in the United States and those who grew up in homes in which a language other than English was spoken had somewhat lower scores than the average of the total sample. In general, the three most difficult topics were first aid, birth control methods, and fire emergencies.
- *Interpersonal Competencies.* In general, this category was more difficult for men, those with little education, the elderly, and those whose parents were not born in the United States.
- *Socio-political Competencies.* Ethnic minorities, those at low occupational levels, and those with non-English speaking home backgrounds had the largest performance deficits.

New York External High School Diploma Program Competencies

The External High School Diploma Program for Adults in New York State bases the award of a diploma on demonstration of generalized and individualized competencies. It is not an instructional program, but concentrates on the identification and assessment of competencies. The generalized competencies are those considered to be prerequisite to further learning.

When the program was being developed, studies identifying competencies (e.g., the APL study) were not available. As a starting point, the project design group identified seven general areas: Communication, Computation, Self-Awareness, Social Awareness, Consumer Awareness, Scientific Awareness, and Occupational Preparedness (Bailey et al., 1973). Competencies in each of these areas were identified with the assistance of a task force of 14 persons having a knowledge of secondary school curricula, prior professional experience with adult learners, broad life experience, and ability and prior experience in writing behavioral objectives.

The program developers, working in small groups, identified and agreed on 64 competencies in response to the question, "What skills do adults need to cope with daily living?" Representatives from small business, industry, unions, schools, and social agencies reacted to

the list, which was then refined, and the regional committee for the diploma program reviewed and critiqued the list prior to the final approval (Nickse, 1977).

Two assumptions guided the task force:

- That the application of learning is holistic; skills such as reading and math were therefore to be demonstrated in context.
- That competencies and the performances by which they are tested must be related to the common developmental tasks of adulthood.

Program staff clearly recognized that the choices of competencies and the selection of skills to be assessed involved value judgments and were somewhat arbitrary. Nevertheless, the similarity between the content of the New York list and that of other listings is remarkable.

The list of generalized life skills minimum competencies, however, should be considered within the context of the entire program design, which assesses the possession of the competencies through five tasks: (1) a series of exercises related to community awareness; (2) an interview concerning personal and family health; (3) a series of exercises related to occupational preparedness; (4) an interview in which personal and social awareness issues are addressed; and (5) the application of problem solving skills to consumer purchases. Once candidates have satisfied the generalized competency requirement they must also demonstrate competency in occupational/vocational and advanced academic or specialized skills (music, art, community service) to qualify for the diploma.

The process of identifying and assessing competencies in each area involves many individuals in the community. For example, in the occupational and vocational area, experts from the community identify the competencies to be demonstrated. The process includes identification of the candidate's job skills; a review of the *Dictionary of Occupational Titles* specific job skills by the program assessor; identification of the community "expert"; establishment of standards and competencies by the expert; administration of the performance assessment by the expert, in conjunction with the assessor; and review by all experts of competencies identified and performance levels expected. The process thus emphasizes the identification of job skills competencies that include local standards for performance. To date, over 90 checklists of competencies have been developed through this procedure.

Since the selection of area and particular competencies within each area are individualized, the cross-reference competency summary in section 6 of this paper considers only those included in the generalized life skills areas. The stress on the five tasks listed above has also been taken into account.

National Center for Research in Vocational Education Project

The Occupational Adaptability Research Program at Ohio State University's National Center for Research in Vocational Education (NCRVE) has recently completed an investigation of competencies and literacy needs for occupational adaptability and transferable skills (Selz, 1980). The concept of transferability presented considers the basic academic skills as underlying components of functional competency and stresses the ability to transfer skills and knowledge previously learned to a new situation. Occupational success—not just securing but keeping a job, changing and advancing, and feeling satisfaction—was seen as contingent on

possessing the ability to transfer. Within this framework, the project staff sought to collect information that would be useful to practitioners and legislators concerned with competency-based education or minimal competency testing.

A master list of functional competencies related to occupational adaptability was compiled from those included in other major research and testing efforts. These tasks were ranked according to priority by experts in adult competency-based education and personnel representatives from business. Competencies were defined in terms of specific basic skills. A survey consisting of 39 statements phrased in everyday language was then developed and field tested to eliminate ambiguity.

People surveyed responded to the following questions:

- Where should a person be taught this (home, school, or on the job)?
- Where do most people actually learn this (home, school, or on the job)?
- If a person did not have this ability, how well would he/she do at work (do well, have some difficulty, or have a great deal of difficulty)?

It is this last question that was designed to determine the importance of the competency.

Four groups were surveyed: the general adult population, high school students, teachers, and employers. A representative sample of 2,083 English-speaking adults 18 years and older were interviewed on a door-to-door basis. To obtain responses from teachers and high school students, 106 public school systems in the contiguous United States were systematically selected and asked to participate; 37 agreed. Although the design called for a sample of 1,500 teachers, only 978 responded. A total of 1,566 high school seniors, selected from the same school systems as the teachers, also responded to the survey. Employers were selected to represent type of industry, size of company, and geographic region. Of the 200 surveys mailed, 107 were returned.

Opinions regarding where skills should be taught did not vary greatly among the four response groups. There was also high agreement between where an ability should be taught and where it was actually learned. However, many competencies thought to be the responsibility of the school were actually learned at home or on the job. With respect to judging the importance of an ability, the responses were consistent across the groups. Respondents thought people would have some problems if they did not have the abilities listed. On the basis of mean responses of the general adult population, the competencies were ranked by importance for doing well at work. The 10 most important competencies, in rank order, were:

- Use reading, writing, and math skills called for by a job.
- Use tools and equipment called for by a job.
- Deal with pressures to get the job done.
- Get along with others.
- Follow rules and policies.
- Do parts of the job that one may not want to do.
- Have a good work attitude.

- Follow job safety and health rules.
- Hold a job that matches one's interests and abilities.
- Get a job for which one has the training and background.

Though the correlation across groups in the ranking of important abilities was high, the employer group was more emphatic than the other groups on the need for many of the abilities.

For the purposes of the Summary of Competencies, the general population response rate is listed. It must be noted, though, that since no competency was perceived as unimportant, all 39 could be considered relevant and important to developing occupational competency.

A second survey was conducted to determine the consumer economics competencies needed to get along in life. Similar procedures were used to arrive at a 40-item consumer economics survey. Again, respondents were asked: "Where should you be taught this ability?" and "Where did you actually learn this ability?" Importance was assessed by asking: "If you did not know how to do this, how well would you get along in life?" Response options were: "Get along very well," "Have some problems," and "Have a great deal of difficulty." A separate national probability sample of 2,054 persons was selected using a procedure similar to that used for the occupational adaptability general population survey. (For the Summary of Competencies, the percentage that indicated "great difficulty" in response to the question of importance was recorded.) The 10 competencies deemed most important, in rank order, were:

- Make change using bills and coins.
- Manage money so that you can pay your bills.
- Balance a checkbook.
- Write a check or fill out a money order.
- Keep records and receipts to file income tax forms.
- Add the total (plus tax) of a purchase.
- Prepare and stick to a budget.
- Be able to tell when you are not getting satisfactory service (like from doctors, lawyers, mechanics, etc.)
- Take good care of your belongings and property.
- Decide which purchases you make are necessary and which are not.

As with the survey of occupational adaptability competencies, the NCRVE project staff will continue to analyze these data, particularly for differences in importance that may reflect a different sense of priorities and needs of various socioeconomic and ethnic/racial groups.

Northwest Regional Educational Laboratory Functional Literacy Project

Recognizing that people's mastery of and need for reading, writing, and other skills vary tremendously according to their societal circumstances and personal situations, the Functional Literacy Project at Northwest Regional Educational Laboratory (NWREL) designed a procedure to identify the specific literacy needs of a community. The process is now being field

tested in one site. A three-phase procedure has been outlined for this study (Reder, 1978):

- *Phase I*—Identification of the ways in which literacy skills are patterned into people's daily lives. This identification will entail gathering such information as: "What do people in the community read in the course of their everyday activities?" and "What materials are used?" The researchers will also attempt to identify where and how literacy is acquired and how literacy affects oral and written communication. The information gathered will be used to ascertain the different life domains (e.g., work, social life) in which literacy skills are used and the value placed on those skills.
- *Phase II*—Select one or more life domains for intensive investigation. Community interest and the opportunity to conduct research will be considered in the selection of the domain(s), and the procedures used in Phase I will then be applied more intensively to the domain(s) selected.
- *Phase III*—Design and delivery of literacy instruction. The instructional component will also enable project staff to collect longitudinal data regarding adult literacy development.

Implicit in the above process is an awareness of literacy as a contextual tool. Use of written materials is seen as part of a broader activity, and is affected by the materials pertinent to this activity and other components of a total situation. While a lengthy and involved procedure, it is one that shows great potential for identifying more accurately the competencies necessary for successful functioning in a specific location and for a specific purpose.

5. Summary of Purposes and Procedures

The studies presented in this paper vary in their purposes, procedures used, and manner of stating the competencies and of asking questions on a survey. This is inevitable considering the many judgments that the study directors and sponsors had to make. This variability makes cross-referencing difficult and, at times, quite subjective.

As a prelude to the comparison of competency objectives presented in section 6, the variations in purpose and method are presented first. These should assist the reader in interpreting the various findings and using the summary charts. Collectively, these studies had several purposes:

- To identify necessary competencies for adults nationally, regionally, within a state, or within a portion of a state.
- To determine the learning needs of adults.
- To gather data for curriculum decisions.
- To ascertain the applicability of or receptivity to competencies specified by the APL study.
- To provide a model for program personnel to determine the needs of their students.
- To expand upon the APL list.

Several studies included multiple purposes. Table 3 summarizes the purposes for conducting each of the studies.

TABLE 3

PURPOSES OF STUDIES

Purposes \ Study	APL-Based Studies						Studies Not Limited to APL					
	APL	NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	ALASKA	UTAH	ADKINS-CONN.	NEW YORK	CALIF.	NCRVE	NWREL Functional Literacy
To identify necessary competencies (necessity)	X		X	X			X		X	X	X	X
nationally	X										X	
regionally		X										
statewide			X		X	X	X		X	X		
portion of a state				X				X		X		X
To determine the learning needs of adults (interest)			X	X	X			X		X		
To make curriculum decisions	X	X	X			X	X					X
To ascertain the applicability or receptivity to APL		X	X		X							
To provide a model for local needs assessment for programs						X				X		X
To expand APL list				X						X	X	

A list of possible procedures for identifying competencies and an indication of procedures used in each study are summarized in table 4. These procedures include:

- Collecting prior literature and data from a variety of sources. (An X next to "Collecting prior literature and data" indicates information other than APL.)
- Collecting additional information:
  - —Questioning adults regarding what they need to know or are interested in learning (qualitative).
  - —Asking experts or providers of services to adults to identify what adults generally or clients of a service need to be able to do.
  - —Asking people to respond to a list of pre-specified competencies and to indicate necessity or interest (quantitative; questionnaires/surveys).

TABLE 4

SUMMARY OF PROCEDURES USED TO IDENTIFY COMPETENCIES NEEDS

Procedure \ Study	APL-Based Studies						Studies Not Limited to APL					
	APL	NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	ALASKA	UTAH	ADKINS-CONN.	NEW YORK	CALIF.	NCRVE	NWREL Functional Literacy
Collecting prior literature and data from a variety of sources	X						X		X	X	X	
Collecting additional information:												
a) Questioning adults regarding what they need to know or are interested in learning (qualitative)				X				X				
b) Asking experts or providers of services to adults to identify what adults generally or clients of a service need to be able to do	X								X	X	X	

TABLE 4 (continued)

Procedure \ Study	APL-Based Studies						Studies Not Limited to APL					
	APL.	NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	ALASKA	UTAH	ADKINS-CONN.	NEW YORK	CALIF.	NCRVE	NWREL Functional Literacy
c) Asking people to respond to a list of pre-specified competencies and to indicate necessity or interest (quantitative; questionnaires/ surveys)		X	X	X	X	X				X	X	
d) Analyzing what people do in relationship to performing certain roles or activities									X			X
e) Selecting models of people "functioning successfully" and analyzing behaviors and qualities that are related to success												

TABLE 4 (continued)

Procedure \ Study	APL-Based Studies						Studies Not Limited to APL					
	APL	NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	ALASKA	UTAH	ADKINS-CONN.	NEW YORK	CALIF.	NCRVE	NWREL Functional Literacy
Administering tasks to a sample of adults												
a) Multiple-choice, open-ended items	X		X		X					X		
b) Performance-based tasks												

—Analyzing what people do in relationship to performing certain roles or activities.

—Selecting models of people "functioning successfully" and analyzing behaviors and qualities that are related to success.

•Administering tasks to a sample of adults:

—Multiple-choice, open-ended items.

—Performance-based tasks.

The procedures marked for each study are those specified in the reports. Although the New York State program model uses performance-based assessment to award diplomas, that procedure was not used to determine minimal competencies to be required in the program. Thus, two methods for determining minimal competencies—analyzing the behavior and qualities of persons functioning successfully, and administering performance tasks to a sample of adults—were not employed by any of these efforts.

Because they were done prior to the publication of the APL study, neither the Adkins-Connecticut study nor the New York State listing of minimal competencies was influenced by the APL findings. Additional data sources for these efforts and the Utah study included: (1) Bureau of Labor Statistics data and expenditure pattern data; (2) consumer and social service agencies; (3) studies regarding adult development; (4) other sociological writings; (5) general literature regarding competency.

6. Summary of Competencies

To compile the cross-reference Summary of Competencies from the studies reviewed, the 65 APL objectives were used as the base list. The use of the APL category labels and objectives does not imply a preference for the organization and use of terms presented in APL. Rather, the choice seemed reasonable as a purely practical decision since many of the studies were designed with direct reference to APL.

To prepare the cross-reference list, each APL major objective and the enabling objectives associated with it were listed. For each study (with the exception of the NWREL Functional Literacy Project, which has not yet produced a set of competency statements), the competencies included were cross-referenced against the APL enabling objectives. Cross-referencing at this level of detail revealed variations in emphasis and inclusiveness.

Decisions regarding congruence of the competency statements required substantial judgment. Variations in phrasing and organization of competency statements across studies frequently made it difficult to judge the original researcher's intent and the extent of similarity with APL statements. Such decisions were somewhat clearer with the APL validation studies, so long as the basic comparison was with the major objective. Even for these studies, however, there were inconsistencies in scope and procedures. For example, the number of items used to determine necessity of APL consumer economic competencies ranged from 8 in Pennsylvania to 43 in the New Jersey ESL study. In some cases, researchers used several statements that paralleled enabling objectives under a competency; in other cases, one statement roughly paralleled several APL enabling objectives under a competency. Sometimes, no statements were included for a particular APL objective. The authors of these reports were asked to

review these judgments, and either agreed or made suggestions for change. Most of their recommendations were readily accepted.

The variations in items from the statement of APL objectives may have resulted from several considerations: (1) desired length of the overall survey; (2) comprehensiveness or simplicity of the original APL statements; and (3) researchers' own judgments regarding importance. The final statements often represented a trade-off between creating succinct, readable items and conveying a competency rather than a task. The less specific the item, the more the respondent could read into it. The exact behaviors respondents associate with a competency statement may also vary, demonstrating the difficulty of obtaining reliable responses to the competencies intended when preparing instruments.

Considering the variations across the studies, it seemed appropriate to list the main intent of the original APL competency, especially since the more recent APL listing contains objective statements that are phrased somewhat differently than the original list of 65 objectives. Therefore, the objectives listed in the Summary of Competencies are topical—roughly parallel to the APL major objectives—rather than a series of competency statements.

The Summary of Competencies is in four parts:

- Part 1—Knowledge/Information Categories.
- Part 2—Basic Skills.
- Part 3—Major Objectives by Competency Area.
- Part 4—Additional Objectives (i.e., not emphasized in APL, but included in other studies).

Most of the studies covered all five of the APL knowledge categories. Consumer economics and occupational knowledge, however, seemed to be emphasized more. The Utah effort considered only consumer economics, but on closer examination, many of its statements related to APL objectives in the community resources, health, and occupational knowledge areas. Community resources, an area often ranked as low in importance by ABE students and staff, received a greater emphasis in two listings (Adkins-Connecticut and New York). The low perceptions of importance for community resources, however, were often a response to the specific APL objectives. Use of community resources was included in the other four knowledge areas as part of many other competencies (e.g., "using community resources to deal with fradulent practices" might be included in a consumer economics section). Cultural and self-awareness was an additional knowledge category not emphasized in the APL presentation but used in several studies.

The summary of basic skills also required a great deal of the writer's judgment in considering the direct statements in the reports, knowledge of the studies, and inferences drawn from the competency statements. The findings, when considered in conjunction with practice and practitioner comments, underscored the perceived importance of reading, writing, and math skills and of preparation for passing the GED test for high school equivalency. While problem-solving and interpersonal relations skills were included in the APL matrix, the perceived importance of these abilities varied. At least two—Adkins and New York—appeared to emphasize these skills more heavily than did the APL-related efforts.

Parts 1, 2, and 3 of the Summary of Competencies used the APL listing of 65 objectives as the basis of comparison, although some modifications and a few additions were introduced. The summary indicates the degree of correspondence between the individual studies and the APL baseline list.

In four of the studies—NWREL USOE Region X, New Jersey ABE, New Jersey ESL, and NCRVE—the respondents indicated whether they thought the competency was necessary, important, or helpful in accomplishing tasks of adult life. The summary reports the percentage who felt this was so. In the Alaska project, the 81 statements were ranked in order of priority. The summary lists the ranking for each.

Part 4 of the summary lists competencies that were added by the studies not limited to the APL. In these cases, no judgments as to degree of relatedness were made.

While the Summary of Competencies indicated correspondence among the various topics considered, it did not totally convey the variations in emphasis. For example, the APL listing incorporated a strong emphasis on basic skills in all objectives. The Adkins list was comprised of a series of problem, not competency, statements. Many of the validation studies—the New Jersey ones and Alaska, for instance—were comprised of a list of general statements that may have corresponded to a major goal or to several of the substeps under that goal.

It must also be remembered that several of the studies were limited to only certain knowledge areas (e.g., consumer economics). Decisions regarding which components to include and how to phrase the statements determined what choices the respondents could make about the importance of a competency. The inclusion of a topic or skill on a survey represented the researcher's and sponsor's judgment about what was important. Thus, these judgments about what would and would not be included in the survey, as well as the presentation of the items and questions, established the limits for the responses.

This Summary of Competencies is not intended to be a definitive listing. It is useful in pointing out those areas that a number of large-scale studies have determined as important or necessary for functioning in adult life. There appears to be a fair amount of consistency across the 11 projects included, as well as a number of areas in which one or more of them have put greater or lesser emphasis. The topics listed by those studies not limited to APL indicate other areas to be considered.

The purpose of the summary and this report is to assist Adult Basic Education program administrators and instructors in selecting those areas that would be appropriate for their programs. Variations according to region, state, locality, population group, and individual student needs are likely to continue to exist. Those who are considering program changes consistent with new emphasis in the Adult Basic Education Act are urged to look at the results of these studies as a starting point. Substantial time and effort could be saved by adapting these competencies to individual program and student needs rather than beginning the process all over again.

SUMMARY OF COMPETENCIES, PART 1: KNOWLEDGE/INFORMATION CATEGORIES

Category \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL 65 obj.	APL 41 obj.	NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
Consumer Economics	●	●	●	● 37% h 60%	●	●	●	●		●	●	●
Community Resources Problems in living in community	●	●		● 24% h 48%		●	●	◑	◎	◎	◑	
Government and Law Citizenship	●	●		● 38% h 71%		●	●			●	●	
Health and Safety Marriage and family problems Problems of being a parent	●	●		● 28% h 52%		●	●	◑	◎ ◎	●	●	
Occupational Knowledge	●	●		● 40% h 71%	●	●	●	◑		●	◑	●
Cultural Self-awareness Social awareness Problems in personal growth and development								●	●	● ●		

Key to Symbols: ● = essentially the same as APL; ◎ = essentially the same as APL, but with greater emphasis; ◑ = emphasis on a sub-category of APL; o = marginal relationship to APL.

Respondents' Opinions: h = percent reporting objective would be helpful; p = priority ranking of the objective out of total of 81; all other percents are of those reporting objective is important or necessary.

SUMMARY OF COMPETENCIES, PART 2: BASIC SKILLS

Skills \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL 65 obj.	APL 41 obj.	NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
Communications Skills	●	●	●	●	●		o	o	◑	●	◑	o
Reading	●	●		●		●				●		
Writing	●	●		●		●				●		
Listening, speaking, viewing	●	●		●						●		
Language				●	●							
Computation Skills	●	●	o	●	●	●	●	o	o	●	◑	◑
Scientific awareness							p 61			●		
Interpersonal Relations	●	●					◑		◉	◉	●	●
Problem Solving (making decisions)	●	●				●			◉	◉		
Specific Job Skills				●					●			●

Key to Symbols: ● = essentially the same as APL; ◑ = emphasis on a sub-category of APL;
◉ = essentially the same as APL, but with greater emphasis; o = marginal relationship to APL.

Respondents' Opinions: h = percent reporting objective would be helpful; p = priority ranking of the objective out of total of 81; all other percents are of those reporting objective is important or necessary.

SUMMARY OF COMPETENCIES, PART 3: MAJOR OBJECTIVES BY COMPETENCY AREA

Consumer Economics

Study / Objective	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Counting and converting coins and currency, weights, and measures	●	●	● 61%	◑ 15% h 15%	◑ 65% 72%	◑	● p 38 p 67		●	◑	●	o 67%
Understanding income tax	●	●		◑ 60% h 16%		◑	● p 1	●	●		●	o 50%
Managing money (budgeting) and consumerism	●	●	● 75%	◑ 48% h 19%		◑	● p 4 o p 39	●	●	◉	●	● 65% 37% 46%
Using catalogs	●	●	● 50%			◑	● p 68	●	●		●	● 17%
Using consumer guides, making decisions about purchases	●	◑	● 64%		● 79%	●	◑ p 39	●	●	o	◑	◑ 28%
Factors that affect costs of goods and services	●	◑			● 69%	o	o p 48	●	●		●	o 35%
Understanding how changes in the economy make a difference in how much you have to spend												33%

Key to Symbols: ● = essentially the same as APL; ◑ = emphasis on a sub-category of APL;
◉ = essentially the same as APL, but with greater emphasis; o = marginal relationship to APL.

Respondents' Opinions: h = percent reporting objective would be helpful; p = priority ranking of the objective out of total of 81; all other percents are of those reporting objective is important or necessary.

Consumer Economics (continued)

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Comparison shopping; price vs. quality	●	◑	◑ 64%	○ 33% h 29%	● 73% 68% 88%	○	○ p 48	●	●	◑	◑	○ 25%
Packaging of goods; cost-effectiveness for quality and storage	●		◑ 35%		● 75%	○		●	●		◑	
Sales (understanding and making decisions to buy)	●	◑	◑	○ 20% h 17%		○	● p 50		●	◑	◑	○ 47% 25%
Understanding advertising techniques	●	◑	◑	○ 20% h 16%	● 84%	◑	◑ p 18	●		◑	●	● 31% ◑ 37% ○ 24%
Ordering food and tipping in a restaurant	●	●	● 16%	● 11% h 8%	● 66% 70% 52%	○	● p 75 p 80	●			○	
Purchasing home furnishings	●	◑	◑ 54%		75%	◑	○ p 64	●	●	◉		○ 37% 19% 25%

Consumer Economics (continued)

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Obtaining housing, utilities	●	●	● 73% 58%	◑ 38% h 20% 38% h 18%	◑ 72% 64% 44% 84% 69% 63% 72% 76%		● p 55 p 60 p 70	●	●	●	●	○ 27% 33% 31%
Buying and maintaining a car	●	●	● 64%		○		● p 58 p 47	●			●	
Care of personal possessions (cleaning, having things fixed, warranties)	●	●	● 53%	○ 43% h 26%	○ 72% 88%	◑	● p 65 p 64				●	● 39% 27%
Banking services	●	●	● 50%	◑ 36% h 19%	84%	◑	● p 29	●			●	◑ 51% 52% 31% 33%
Obtaining mortgages												31%
Determining the most profitable way to save money												

Consumer Economics (continued)

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Understanding credit systems	●	●	● 58%	● 20% h 20%	◑ 73% to 79% Several items	o	● p 36	●		◉	●	o
Establish a credit rating												30%
Bank loans												36%
Financing through a store												28% 28%
Understanding and selecting insurance	●	●	● 71%	◑ 46% h 19%	◑ 78%	◑	● p 8	●	●		●	● 30%
Fraudulent practices; resources for protection	●	●	● 68%	● 62% h 17%		●	● p 3	●	●	◑	●	◑ 24% 30% 27%
Consumption of world resources; individual's responsibility	●	●	● 53%				● p 52	◑			●	◑ 27%

SUMMARY OF COMPETENCIES, PART 3: MAJOR OBJECTIVES BY COMPETENCY AREA

Occupational Knowledge

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Sources of employment	●	●		◑ 27% h 24%	● 79% 74% 75%	◑	● p 13 ○ p 63	●	●	●	●	● 26%
Requirements of different occupations	●	◑			● 84% 77% 81%	◑	● p 16 ○ p 10	●	●	◑	●	● 29% 40%
Occupational interests (testing and counseling)	●	●		● 44% h 25%	● 85%	◑	○ p 16 p 24	●	●	◑	●	● 40%
Private and other employment agencies	●	●			● 75%		● p 27 ○ p 24	●	●	○	●	● 26%
Job applications and interviews	●	●		● 46% h 27% 31% h 24%	● 82% 79% 62% 91%	●	● p 54 p 20	●	●	◉	◑	◑ 29% 28%

Occupational Knowledge (continued)

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Standards of behavior for types of employment	●	●		● 34% h 19%			◑ p 5 p 44	●	●	◑	●	● 37% 51% 32% 44% 45% 48%
Attitudes and skills that may lead to promotion	●	●					● p 5 p 6	●	●		●	● Range from 20-35%
Financial and legal aspects of employment	●	●		o 46% h 19% 53% h 22%	● 84% 77% 81% 71% 77%		o p 9	●	◑	o	◑	◑ 24% 33% 18% 19% 22%
Aspects of employment other than financial that affect job	●				● 77% 66% 63%		● p 56	●	●	◑	●	● 40% 32% 51% 27% 39% 28%

SUMMARY OF COMPETENCIES, PART 3: MAJOR OBJECTIVES BY COMPETENCY AREA

Community Resources

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Types of community resources	●	●					● p 49	●	●	●	●	
How and when to apply for community services, such as social security and medicare	●	●		● 40% h 22%			● p 71	●	●	◑	●	
Recreational services	●	●		● 13% h 16%			● p 59	●	●	◑	●	
Informational services (e.g., media, telephone, library)	◑	●		● 44% h 30%			● p 49	●		○	●	
Resources for acting on citizens complaints	●					○	◑ p 3 p 35	●	●	◑	●	◑ 27%
Recognize traffic signs, driving regulations, safety	◑	●		● 17% h 11% 27% h 14%			● p 66 p 72		●	◑	●	
Transportation schedules, fares, informational resources	●	●		● 10% h 15%		●	● p 75	●	●	○	●	

Community Resources (continued)

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Time zones, daylight savings time	•						•		•			
Making travel plans, arrangements	•	•				•	p 46	•				
Relationship between transportation and public problems (traffic problems, energy)	•					o		•	•			
Understanding the influence of mass media		•					• p 51 p 57					

SUMMARY OF COMPETENCIES, PART 3: MAJOR OBJECTIVES BY COMPETENCY AREA

Health

Study / Objective	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Safety measures; prevention of injury and accident	●	●		o 45 h 15			● p 7 p 34		●	◐	●	
Medical and health services in the community	●	o						●	●	o	●	
Pregnancy and prenatal care	●	●					● p 77 p 79		●		●	
Family planning and birth control	●	●		● 16% h 11%			● p 78 p 81	●	●	o	●	
Child-rearing practices and procedures for guarding health and safety of a child	●	●		o 16% h 9%			● p 41 p 17 p 49	●	●		●	
Health needs and concerns of the adolescent and ways to ease transition to adulthood	●	●					● p 11 p 25 p 26	●	●		●	

Health (continued)

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Maintaining good mental and physical health	●	●		o 36% h 24%			● p 12 p 37	●	●	◑	●	
Understanding self and interpersonal relationships	●	●					● p 37 p 19		●	◑	●	
First aid and emergencies	●	●		o 31% h 20%			● p 2 p 17			◑	●	
Health and medical insurance	●	◑					o p 8	●	●			
Proper nutrition	●	●		32% h 21% 16% h 24%			● p 42 p 43 o p 14	●	●	◑	●	
Use of drugs and Federal control of drugs	●	●					◑ p 31		●	◑		
Marriage and family decisions, responsibilities, relationships		●					● p 53 p 69		●		●	

SUMMARY OF COMPETENCIES, PART 3: MAJOR OBJECTIVES BY COMPETENCY AREA

Government and Law

Objective \ Study	APL-Based Studies							Studies Not Limited to APL				
	APL		NWREL, USOE Region X	N.J. ABE	N.J. ESL	Penn. ABE	Alaska	Utah	Adkins-Conn.	N.Y.	Calif.	NCRVE
	65 obj.	41 obj.										
Structure and function of the Federal Government Constitution, branches, etc.	●	●		○ 36% h 26%			● p 21 p 32		●	○	●	
(also state and local governments)							● p 30 p 28					
Participation in government process										●		
Relationship between individual and the government	●	●		◑ 30% h 15%			● p 23		●	◑		
Relationship between individual and the legal system	●	●		◑ 45% h 18% 31% h 17%			● p 23 p 33 p 35 p 15 p 8		●	◑	●	
Legal documents, contracts	●	●					● p 22 p 40				●	
Relationship between government services and taxes	●			47% h 19%							●	

SUMMARY OF COMPETENCIES, PART 4: ADDITIONAL COMPETENCIES

Utah Study

Major Objective: Consumers' Role in the Economy

Enabling Objectives

- Should recognize that in a free enterprise economy expenditures amount to an economic vote for type and quality of goods
- Must recognize that by becoming an efficient and effective decisionmaker they will improve society's allocation of resources
- Fundamentals of how a free economy works and how the role of consumer affects overall market structure
- Knows importance of effective and efficient decisionmaking, management concepts and techniques

Major Objective: Introduction to Life Cycle/Life Style Concepts

Enabling Objectives

- Awareness that life cycle positions have effect on problems individuals face
- Should understand the life cycle concept and its effect on life style or personal consumption
- Recognize that life cycle analysis can be effective planning aid

Major Objective: Telephone Services

Enabling Objectives

- Should be aware of total costs of telephone service and habits which can save money
- Needs to know how costs vary with types of service
- Awareness of advantages that telephone services offer
- Awareness that vendors other than phone company distribute telephone equipment

Major Objective: Wills

Enabling Objectives

- Parents and persons with substantial assets have obligation to prepare a will
- Consumers should believe that it is important to have estate plans reviewed periodically by an attorney
- Consumer should know what legal skills vary automatically from one attorney to another
- Should know the basic laws of descent and distribution
- Should know how gifts, trusts, and estates are taxed

SUMMARY OF COMPETENCIES, PART 4: ADDITIONAL COMPETENCIES

Adkins-Connecticut Study

Major Objective: Problems of Living in the Community

Enabling Objectives:

- Dealing with conflicts between own children and neighbors' children; also dealing with unreasonable neighbors
- Special problem of recent unemployment and the maintenance of housing
- Overcrowding, particularly for families with many children, exacerbates family conflicts and tensions
- Fear of danger from others on dark nights going to and from public transportation
- People on welfare do not have adequate resources for transportation to and from school
- Psychological consequences of lack of adequate transportation
- Dealing with school boards and school officials
- Not feeling a part of the community through participation in community

Major Objective: Problems of Being a Parent

Enabling Objectives

- Disappointment with the school system
- Misdiagnosis of child as having a learning disability
- Dealing with special problems of retarded, physically handicapped, or hyperactive children
- Helping handicapped children with feelings of rejection and exclusion
- Getting help in dealing with handicapped children
- Finding out about day care facilities
- Identifying responsible people to care for children
- Need for babysitter or day care in order to go to school or work
- Lack of after-school and summer programs for children
- Adult at lower educational level than children feels inferior
- Dealing with separation, divorce, or desertion
- Dealing with lying, theft, and sneaky behavior
- Dealing with neighbors' children and neighbors
- Problems of child abuse
- Helping children with problems of death

Major Objective: Marriage and Family Problems

Enabling Objectives

- Deterioration of marital relationship and family life after prolonged unemployment
- Helping one's spouse deal with feelings of failure due to unemployment
- Husband takes out frustrations on wife and family
- Money problems are major source of argument between husband and wife
- Conflicts over raising children from a previous marriage
- Difficulties of divorce
- Difficulties in meeting someone of the opposite sex
- Unemployment and loss of income makes household management extremely difficult

Major Objective: Occupational and Career Problems

Enabling Objectives

- Belief that fate or chance determines what job you get and in an inability to affect destiny
- Limited access to on-job-training programs, summer employment, etc.
- Problems that prevent certain groups from enrolling in educational and training programs
- Need for training leading to taking correspondence and inevitably failing
- Lack of coordination between employment and training agencies
- Difficulty in communicating with physicians
- Impersonalness of doctors
- Lack of concern by doctors about medical aid patients, and refusal to see welfare patients
- Inability to get any doctor to come to the house

Major Objective: Problems in Relating to Others

Enabling Objectives

- Knowing how to interpret the facial expressions of others
- Giving in to children's wishes because of peer pressure
- Dealing with discrimination because of being too short, fat, or a minority
- Avoiding opportunities because of fear of being discriminated against
- Discrimination against women in employment
- Dealing with and resolving conflicts between different kinds of life demands
- Difficulty in balancing home and family responsibility and responsibility to self
- Feeling that there are very few places that one can admit one's ignorance

SUMMARY OF COMPETENCIES, PART 4: ADDITIONAL COMPETENCIES

New York External Degree Program

Major Objective: Self-Awareness

Enabling Objectives

- Apply the decisionmaking process
- Identify one's own values, goals, roles, and needs
- Awareness of art in everyday life
- React to or create an exhibit
- React to a live performance
- Identify uses of music to manipulate emotions

Major Objective: Social Awareness

Enabling Objectives

- State contributions of a different culture to American life
- Use history in making decisions or plans
- Function within a group
- State the effects of one group upon another
- State the relationship between the individual and the environment
- Communicate in a socially acceptable manner
- Recognize and share fundamental assumptions and world views about concepts such as fairness, truth (philosophy, science, history)
- Identify the diseases and other health problems associated with one's family
- Recognize normal physical and emotional changes associated with various states of life
- Make family decisions with family members
- Recognize social norms in a variety of situations and exhibit cooperative skills for participating in social life—get along with others

SUMMARY OF COMPETENCIES, PART 4: ADDITIONAL COMPETENCIES

California Study

Major Objective: Occupational and Career Problems

Enabling Objectives

- Problems that prevent certain groups from enrolling in educational and training programs
- Use the tools and equipment the job calls for
- Follow rules and policies
- Use material and knowledge of other people to develop job interests
- Manage one's own time and activities
- Use the reading and math skills the job calls for

Major Objective: Relating to Others

Enabling Objectives

- Dealing with discrimination because of being too short, fat, or a minority
- Discrimination against women in employment
- Knowing how to interpret the facial expressions of others
- Use history in making decisions or plans
- State contrioutions of different culture to American life
- State the relationship between the individual and the environment
- Communication in a socially acceptable manner
- Recognize and share fundamental assumptions and world views about concepts—fairness, truth (philosophy, science, history)
- Identify the diseases and other health problems associated with one's family
- Recognize normal physical and emotional changes associated with various stages of life
- Make family decisions with family members
- Be aware of life cycle positions and their effect on planning future, solving problems, life style and personal consumption patterns

Major Objective: Being a Successful Consumer

Enabling Objectives

- Decide if a more expensive item is worth the extra cost
- Decide what gives you the best return (or profit) on your money, if you want to save money
- Understand how changes in the economy make a difference in how much you have to spend
- Establish a credit rating

California Study (continued)

- Get a mortgage on a house
- Fix things when they break or tear
- Find the right person to sell something to you
- Be able to tell when you are not getting satisfactory service (as from doctors, lawyers, mechanics, etc.).

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SUMMARY OF COMPETENCIES, PART 4: ADDITIONAL COMPETENCIES

National Center for Research in Vocational Education

Major Objective: Adaptability in the World of Work

Enabling Objectives

- Use the tools and equipment the job calls for
- Follow rules and policies
- Persuade others to one's way of thinking
- Use material and knowledge of other people to develop job interests
- Ask for a raise in salary
- Manage one's own time and activities
- Use the reading and math skills the job calls for

Major Objective: Being a Successful Consumer

Enabling Objectives

- Decide if a more expensive item is worth the extra cost
- Decide what gives you the best return (or profit) on your money, if you want to save money
- Understand how changes in the economy make a difference in how much you have to spend
- Establish a credit rating
- Get a mortgage on a house
- Fix things when they break or tear
- Decide between selling something large yourself, such as a house or car, or having someone sell it for you
- Find the right person to sell something to you
- Decide between renting or buying something you may not need very often
- Be able to tell when you are not getting satisfactory service (doctors, lawyers, mechanics, etc.).

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